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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/580,907	05/30/2006	Hiroki Nakamaru	8003-1041	6842
465 7590 01/23/2009 YOUNG & THOMPSON 209 Madison Street Suite 500 ALEXANDRIA, VA 22314			EXAMINER MCNEIL, JENNIFER C	
			ART UNIT 1794	PAPER NUMBER
			MAIL DATE 01/23/2009	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/580,907

Applicant(s)

NAKAMARU ET AL.

Examiner

JENNIFER MCNEIL

Art Unit

1794

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 October 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4, 6-14 and 16-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-14, 16-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-8508)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
2. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:
 1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
3. Claims 1-4, 6-14, and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Umino et al. WO 03/042427 in view of Applicant's Admissions for the reasons of record in the Office Action mailed on 9 October 2007. With respect to Claims 13-19, which require crack permeation, it would be expected that the applied coating layer would inherently fill cracks present on the surface. It is remarked that applicant's Specification does not identify any particular treatment step that is necessitated in order to achieve crack permeation. Furthermore, Umino teaches heat treatment of the coating which would be expected to result in film expansion to fill cracks. As well, Umino teaches, in Figure 1, carbon and phosphorus permeation into the zinc layer, some of which would be expected to derive from phosphorylated epoxy organic components of the organic layer, identified with the water

soluble resin component. With respect the limitation of a polymer of a monomer containing a carboxyl and a copolymer of a monomer containing a carboxyl group, the claimed polymer is described in terms of monomer components, as opposed to composition of synthesized polymer, and so the polymers of Umino, which have not been demonstrated to be incapable of synthesis from these starting monomers, teach and/or render obvious these materials.

Response to Amendment

4. In view of applicant's amendments and arguments, applicant traverses the 112, second paragraph rejection of the Office Action mailed on June 24, 2008. Rejection is withdrawn.
5. In view applicant's amendments and arguments, applicant traverses the section 103 rejection over Umino of the Office Action mailed on June 24, 2008. Applicant argues that Umeno does not teach a blackening treatment. Applicant's specification does not provide a clear definition of "blackening treatment" and on pages 1-2 of the instant specification teaches that black colored steel sheets may be manufactured by performing a blackening treatment such as anode electrolysis, cathode treatment, etc. Umino teaches that the resin coatign may be applied to a metal sheet such as an electrolytic zinc-nickel coated steel sheet (0034). This process is considered to be similar to that referred to by applicant as "blackening treatment" and therefore is considered to teach the limitation "a Zn-Ni plating steel sheet which is processed by blackening treatment" as recited in the instant claims. Furthermore, this limitation is considered a process limitation and unless shown to be structurally different from the "electrolytic zinc-nickel coated steel sheet" of Umino, the reference is considered to meet the limitations of the product formed.
6. Applicant argues that Umino does not teach a water soluble organic resin and teaches only a water dispersible organic resin. As previously stated, the term "soluble" is broad in scope,

and any resin would be expected to inherently possess a finite solubility meeting the claimed term. Moreover, in addition to epoxy resin, Umino teaches including phosphorylated epoxy in the coating composition. Phosphorylated epoxy, having phosphorylation groups, would be expected to be more soluble than non-phosphorylated epoxy and can be reasonably characterized as water soluble resin. Additionally, this limitation is considered to be a process limitation since it refers to the monomers that form the resin and not the composition of the synthesized or final polymer component. Furthermore, applicant does not claim the film in an uncured state. Applicant has not provided any argument that the polymers of Umino would have been incapable of synthesis from these starting monomers.

7. Applicant argues that the claimed invention solved the problem of lowered corrosion resistance due to the blackening treatment and that a liquid state resin can permeate into cracks and dries through curing and provides excellent corrosion resistance. Applicant argues that Umino does not have the same corrosion problems caused by cracks resulting from a blackening treatment. As stated above, Umino is considered to teach a similar method to that disclosed by applicant for performing the "blackening treatment". Furthermore, the claims do not refer to cracks or corrosion, therefore this argument is not considered to be commensurate in scope with the instant claims. Claims 13 and 20 do refer to "minute irregularities" which is considered to be inherent to the electrolysis coating formation of Umino.
8. Based upon these arguments, the 103 rejection of record is maintained.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer McNeil whose telephone number is (571) 272-1540. The examiner can normally be reached on Monday through Friday.
10. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/JENNIFER MCNEIL/

Supervisory Patent Examiner, Art Unit 1794